



**PATIENT**

Max Terman

**SPECIES**

Canine

**BREED**

Rat Terrier X

**SEX**

Neutered Male

**AGE**

13

**WEIGHT**

6.8 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Alyssa Carver

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

Dr. Alyssa Carver

**INVOICE**

44585

**DATE**

1/29/23

**PRESENTING CLINICAL SIGNS**

Patient presented for tremoring, lethargy, seizures, anorexia. BG on presentation was 23 mg/dl and BCS 2-3/9. p has been losing weight over last couple months. p stabilized and BGs continued to be monitored in hospital. BG dropped to 56, but p walking around and acting normal. Primary concern is insulinoma. O declines transfer to specialty hospital. P has heart murmur. Started steroids last night.

Abnormal PE/Chem/CBC/UA Results: ALT 428, Borderline anemia.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

The residual prostate was free of pathology.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.5 cm. The right kidney measured 3.5 cm. Pinpoint to focal minor medullary mineral noted in both kidneys.

**Adrenal Glands**

The left adrenal gland was indistinctly visualized, subjectively measuring 0.21 cm at the caudal pole. The right adrenal gland was not definitively visualized.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver**

Subjective borderline subnormal liver size noted with mild capsule asymmetry. Generalized non-homogeneous to mildly mixed echogenic hepatic parenchyma exhibiting moderate coarse echotexture and evidence of parenchymal remodeling. Subjective adequate hepatic vascular volume. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**Gastrointestinal**

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact yet mildly prominent wall layering noted. The stomach was empty without evidence of retained ingesta, fluid, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Intermittent discreet, non-specific, duodenojejunal mucosal speckling and minor segmental ileus noted.



**PATIENT**

Normal visible colon wall layers were present with apparent formed feces in lumen.

Max Terman

**Pancreas**

**SPECIES**

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Canine

**BREED**

**ULTRASONOGRAPHIC FINDINGS**

Rat Terrier X

- Borderline subnormal liver, benign possible low grade chronic inflammatory hepatopathy
- Mild gastroenteritis pattern
- Heterogeneous pancreas
- Mild chronic renal changes with minor medullary mineral

**SEX**

Neutered Male

**AGE**

13

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A definitive insulinoma was not visualized yet cannot be excluded as this tumor tends to be small and difficult to visualize sonographically. An insulin:glucose ratio on same serum sample if persistent BG < 60 is recommended. No evidence of hepatic or gastrointestinal mass as a contributing factor to the hypoglycemia. Spec cPL to assess for low grade / chronic pancreatitis, bile acids to assess hepatic function or less likely nonobvious shunt are warranted. Screening hepatic FNA assuming normal clotting status may be considered to assess possible inflammatory cell type.

**WEIGHT**

6.8 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Alyssa Carver

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

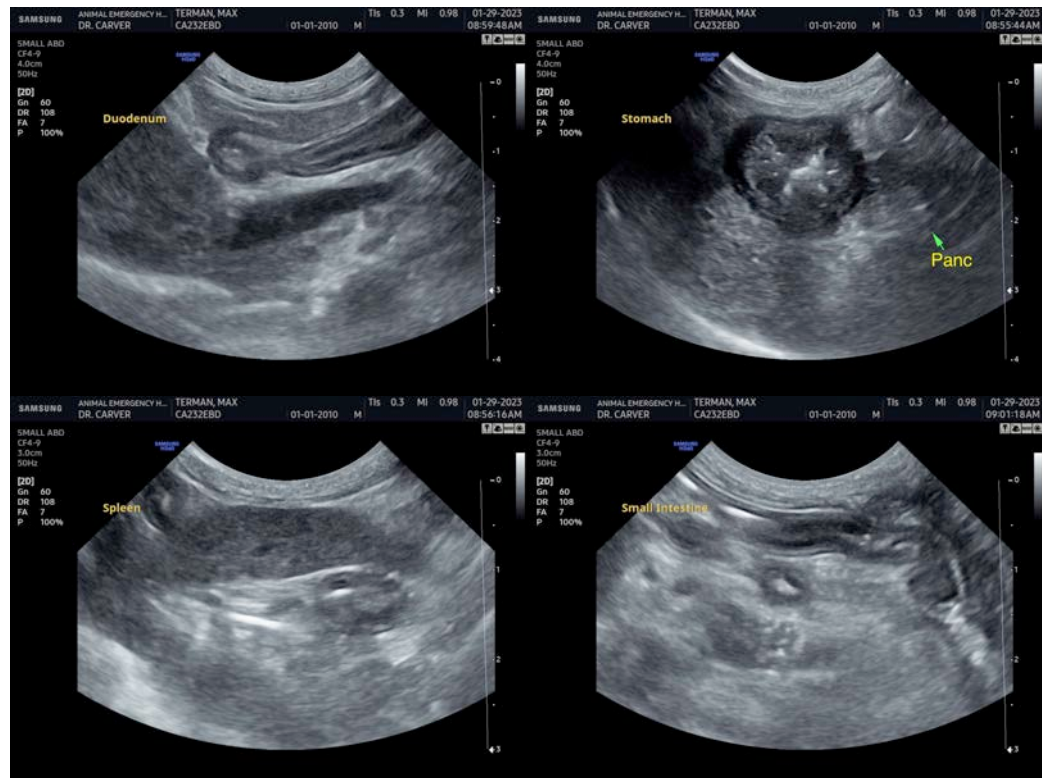
Dr. Ayssa Carver

**INVOICE**

44585

**DATE**

1/29/23





**PATIENT**

Max Terman

**SPECIES**

Canine

**BREED**

Rat Terrier X

**SEX**

Neutered Male

**AGE**

13

**WEIGHT**

6.8 kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Alyssa Carver

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

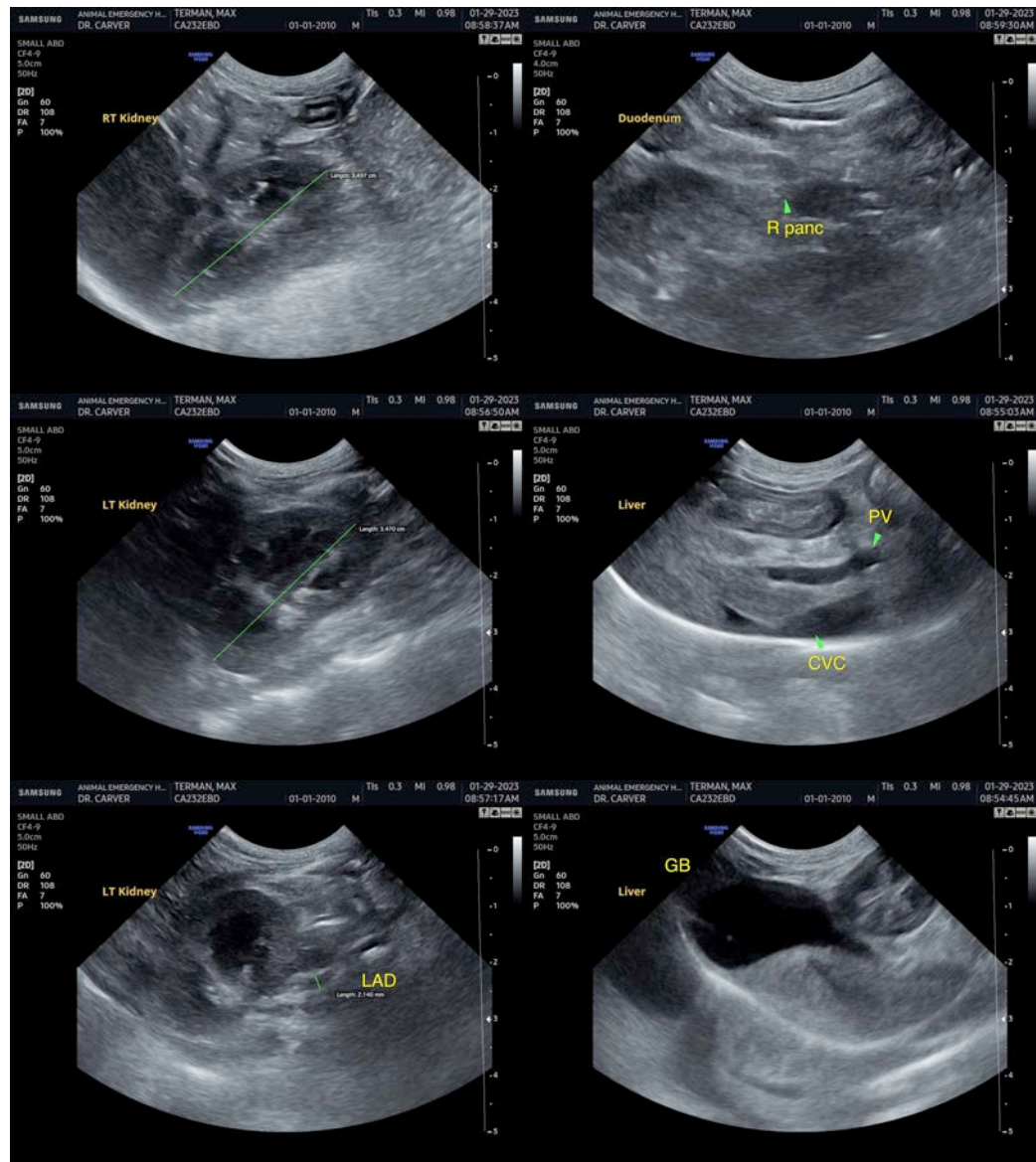
Dr. Ayssa Carver

**INVOICE**

44585

**DATE**

1/29/23



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**

info@SonoPath.com